Having thus described the preferred embodiments, what is claimed is:

1. A method for simulating the effect of a homomorphic filtering operation to enhance an input image, said method comprising:

receiving input data that define an input image;

deriving from said input data lightsource data that represent an image of a lightsource in said input image;

deriving enhanced data that represent an enhanced image, said enhanced data obtained by removing the effect of said lightsource data from the input data.

2. The method as set forth in claim 1, wherein said step of deriving lightsource data comprises:

subsampling said input data to obtain subsampled data defining a subsampled image;

low-pass filtering said subsampled data; and,

upsampling said low-pass filtered data to derive said lightsource data that define a full-scale image of said lightsource.

3. The method as set forth in claim 2, wherein said step of low-pass filtering comprises:

performing a Fourier transform operation on said subsampled data to define said subsampled data in a frequency domain;

low-pass filtering said subsampled data in the frequency domain; and,

performing an inverse of said Fourier transform operation on said low-pass filtered subsampled data to define said low-pass subsampled data in a spatial domain.

4. The method as set forth in claim 1, wherein said step of deriving enhanced data comprises subtracting said lightsource data from said input data.

5. The method as set forth in claim 1, wherein said step of deriving enhanced data comprises dividing said input data by said lightsource data.

6. The method as set forth in claim 2, wherein said step of upsampling said low-pass filtered data to derive said lightsource data that define a full-scale image of said lightsource comprises interpolating said low-pass filtered data using a linear interpolating method.

7. In a xerographic or other non-impact printing environment, a method for enhancing a digital image exhibiting uneven exposure, said method comprising:

receiving input data that define an input image that exhibits uneven exposure;

deriving from said input data lightsource data that represent an image of a lightsource in said input image;

deriving enhanced data that represent an enhanced image, said enhanced data obtained by removing the effect of said lightsource data from the input data.

8. The method as set forth in claim 7, wherein said step of deriving lightsource data comprises:

subsampling said input data to obtain subsampled data defining a subsampled image;

low-pass filtering said subsampled data; and,

upsampling said low-pass filtered data to derive said lightsource data that define a full-scale image of said lightsource.

9. The method as set forth in claim 8, wherein said step of low-pass filtering comprises:

performing a Fourier transform operation on said subsampled data to define said subsampled data in a frequency domain;

low-pass filtering said subsampled data in the frequency domain; and,

performing an inverse of said Fourier transform operation on said low-pass filtered subsampled data to define said low-pass subsampled data in a spatial domain.

10. The method as set forth in claim 7, wherein said step of deriving enhanced data comprises subtracting said lightsource data from said input data.

11. The method as set forth in claim 7, wherein said step of deriving enhanced data comprises dividing said input data by said lightsource data.

12. The method as set forth in claim 8, wherein said step of upsampling said low-pass filtered data to derive said lightsource data that define a full-scale image of said lightsource comprises interpolating said low-pass filtered data using a linear interpolating method.

13. A method for fast implementation of a homomorphic filtering operation, said method comprising:

receiving an input image having an illumination component and an object component;

subsampling said input image to obtain a subsampled image;

processing said subsampled image to obtain a reduced-size image of a lightsource component of said subsampled image;

deriving a full-scale image of said lightsource component of said subsampled image;

using said full-scale image of said lightsource to reduce an effect of said illumination component in said input image.

14. The method as set forth in claim13, wherein said step of using said full-scale image of said lightsource to reduce an effect of said illumination component in said input image comprises:

subtracting said full-scale image of said lightsource from said input image.

15. The method as set forth in claim 13, wherein said step of using said full-scale image of said lightsource to reduce an effect of said illumination component in said input image comprises:

dividing said input image by said full-scale image of said lightsource.